

## CLAIMS

1. A computer program product for simulating the performance of an electrical power system, said computer program product comprising:
  - a computer-readable medium;
  - an electrical power system model module:
    - stored on said computer readable medium, and
    - comprising an electrical power system model, said model comprising
      - interrelated blocks and connections,
      - wherein said blocks represent elements comprising
        - electrical circuits, electromechanical devices, and
        - measurement devices, and
      - wherein the relationships between said blocks and said connections in said model are read-only with respect to an end user;
  - an input module:
    - stored on said computer-readable medium, and
    - operable on a computer to allow an end user to specify at least one characteristic for at least one said block in said model, and
  - a simulation engine:

stored on said computer-readable medium, and  
operable on a computer to  
simulate the performance of an electrical power system  
represented by said model using said specified block  
characteristics, and  
output the results of said simulation

2. The computer program product of Claim 1, wherein:

said electrical power system model module comprises a plurality of said  
models,

said input module allows an end user:

to choose one from among said plurality of models for simulation, and  
to specify at least one characteristic for at least one said block in said  
chosen model; and

said simulation engine is operable on a computer to simulate the performance  
of an electrical power system represented by said chosen model using  
said specified block characteristics.

3. The computer program product of Claim 1, wherein

said input module is further operable on a computer to allow a user:

to indicate a set of said specified characteristics as a saved electrical power system model configuration; and

to indicate a said saved configuration for simulation

said simulation engine is operable on a computer to simulate the performance of an electrical power system represented by said model using said saved configuration of specified characteristics.

4. The computer program product of Claim 2, wherein

said input module is further operable on a computer to allow a user:

to indicate one of said models and one set of said specified characteristics as a saved electrical power system model configuration; and

to indicate a said saved configuration for simulation

said simulation engine is operable on a computer to simulate the performance of an electrical power system represented by said saved configuration.

5. In a computer system, a computer-implemented, end-user assisted method for evaluating the performance of an electrical power system, said method comprising:

defining at least one electrical power system model in a computer, each said model comprising:

interrelated blocks and connections,

wherein said blocks represent elements comprising  
electrical circuits, electromechanical devices, and  
measurement devices, and

wherein the relationships between said blocks and said  
connections in said model are read-only with  
respect to an end user;

prompting an end user to set at least one parameter for at least one said block;  
obtaining said settings;  
simulating the operation of said model within said set parameters;  
outputting the results of said simulation.

6. The method of Claim 5 further comprising

prompting an end user to select one said at least one model; and  
obtaining said selection.

7. The method of Claim 5 further comprising:

prompting an end user to save said settings; and  
obtaining direction from an end user to save said settings

8. The method of Claim 5 wherein said at least one electrical power system model comprises:

- a source-and-grid model;
- a source-and-load model; and
- a source-grid-and-load model.